



SOUTHERN CALIFORNIA ASSOCIATION of GOVERNMENTS

2010 Census, Regional Planning, and Data/GIS Services

Simon Choi, Frank Wen, Cheol-Ho Lee,
Sung Ho Ryu, SeongHee Min, and Jung H. Seo,

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Introduction

- 2010 Census is the most reliable data source, and its accuracy is important because
 - Population count affects federal funding level.
 - Population count also affects regional and local planning, in particular, growth estimates and forecasts.
- Regional planning agency might work with local jurisdictions to review and correct the Census data as part of Data/GIS services.
 - 2010 Census count question resolution (CQR) program.

Introduction – cont.

- Regional planning agency also might be able to develop more accurate small area database.
- This presentation will discuss:
 - Three 2010 Census data files
 - SCAG estimate (California Department of Finance) vs. 2010 Census
 - Census count question

2010 Census Data Files

- Redistricting Data Summary File (Public Law 94-171/PL94)
 - Released March, 2011
 - 5 Major Categories:
 - Population by Race
 - Population by Hispanic Origin
 - Population over 18 by Race
 - Population over 18 by Hispanic Origin
 - Occupancy Status

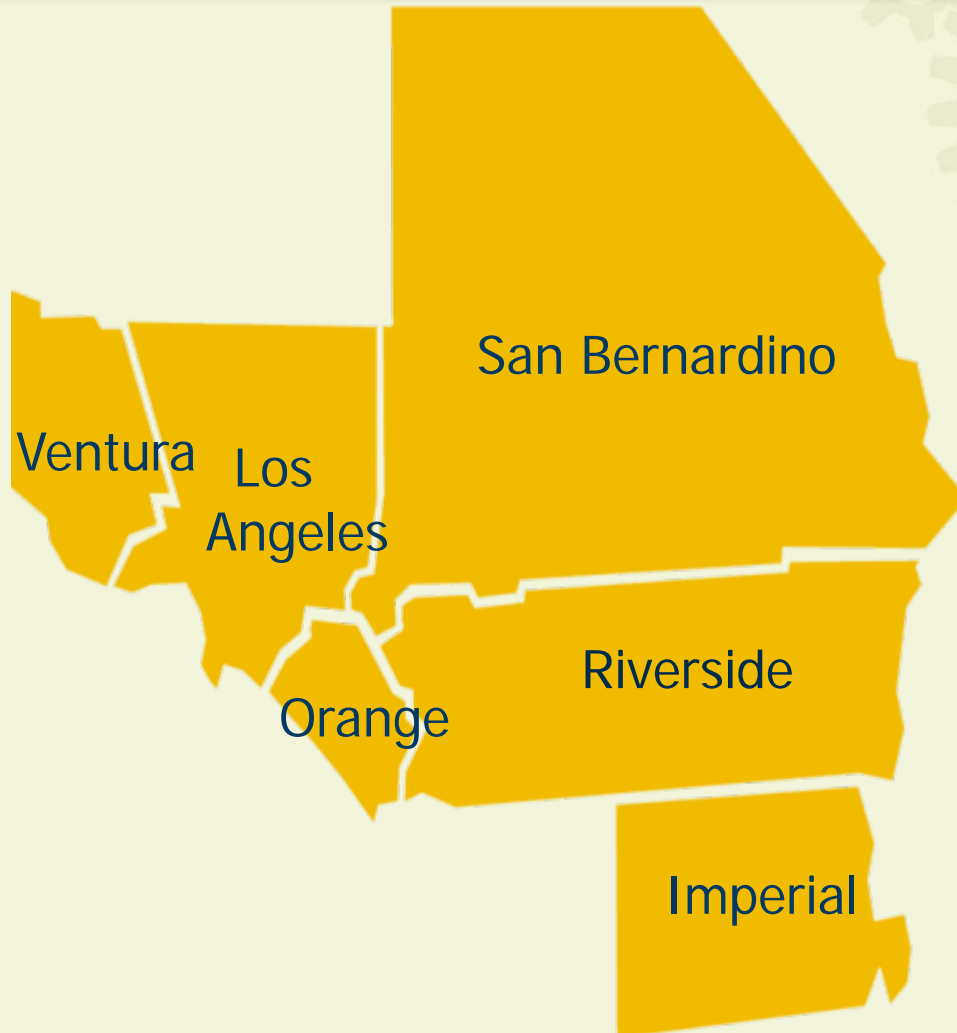
2010 Census Data Files - cont.

- 2010 Census Advance Group Quarters Summary File (an early version of Table P-42 from the 2010 Census Summary File 1).
 - Released April, 2011
 - Group quarters population by seven types of group quarters.
 - The institutionalized group quarters categories: correctional facilities for adults, juvenile facilities, nursing facilities/skilled-nursing facilities and other institutional facilities
 - The non-institutionalized group quarters categories: college/university student housing, military quarters and other non-institutional facilities

2010 Census Data Files - cont.

- 2010 Census Summary File 1
 - Released June, 2011
 - 331 variables: Race, Hispanic Origin, Age, Sex, Household Type, Household Size, Family Type, Family Size, Group Quarters, Occupancy Status, Householder, etc

SCAG Quick Facts



- Nation's largest Metropolitan Planning Organization (MPO) and Council of Governments (COG)
- 6 counties, 191 cities and 38,000 square miles.
- 18 million people (5.8% of US population; 48.5% of California population)
- 17th largest economy in the world
- 9,000 lane miles of freeway; 4 major airports; Nation's global gateway for trade

2010 Population and Households: SCAG Estimate vs. 2010 Census

County	Population				Households			
	SCAG	Census	Census- SCAG	% Difference	SCAG	Census	Census- SCAG	% Difference
Imperial	189,493	174,528	-14,965	-7.9%	53,080	49,126	-3,954	-7.4%
Los Angeles	10,438,379	9,818,605	-619,774	-5.9%	3,270,010	3,241,204	-28,806	-0.9%
Orange	3,174,689	3,010,232	-164,457	-5.2%	1,011,194	992,781	-18,413	-1.8%
Riverside	2,164,121	2,189,641	25,520	1.2%	698,331	686,260	-12,071	-1.7%
San Bernardino	2,114,786	2,035,210	-79,576	-3.8%	620,052	611,618	-8,434	-1.4%
Ventura	843,609	823,318	-20,291	-2.4%	268,981	266,920	-2,061	-0.8%
Region	18,925,077	18,051,534	-873,543	-4.6%	5,921,648	5,847,909	-73,739	-1.2%

Note: SCAG estimate is benchmarked to April 1 2010

Difference in 2008 Population Distribution Using MAPE

County	# TAZ (T1)	MAPE (%)	Maximum (%)	Standard Deviation (%)
Imperial	104	30	172	30
Los Angeles	2,178	11	616	19
Orange	631	11	1,090	46
Riverside	465	17	208	22
San Bernardino	377	18	319	29
Ventura	201	24	2,539	179
SCAG Region	3,956	14	2,539	48

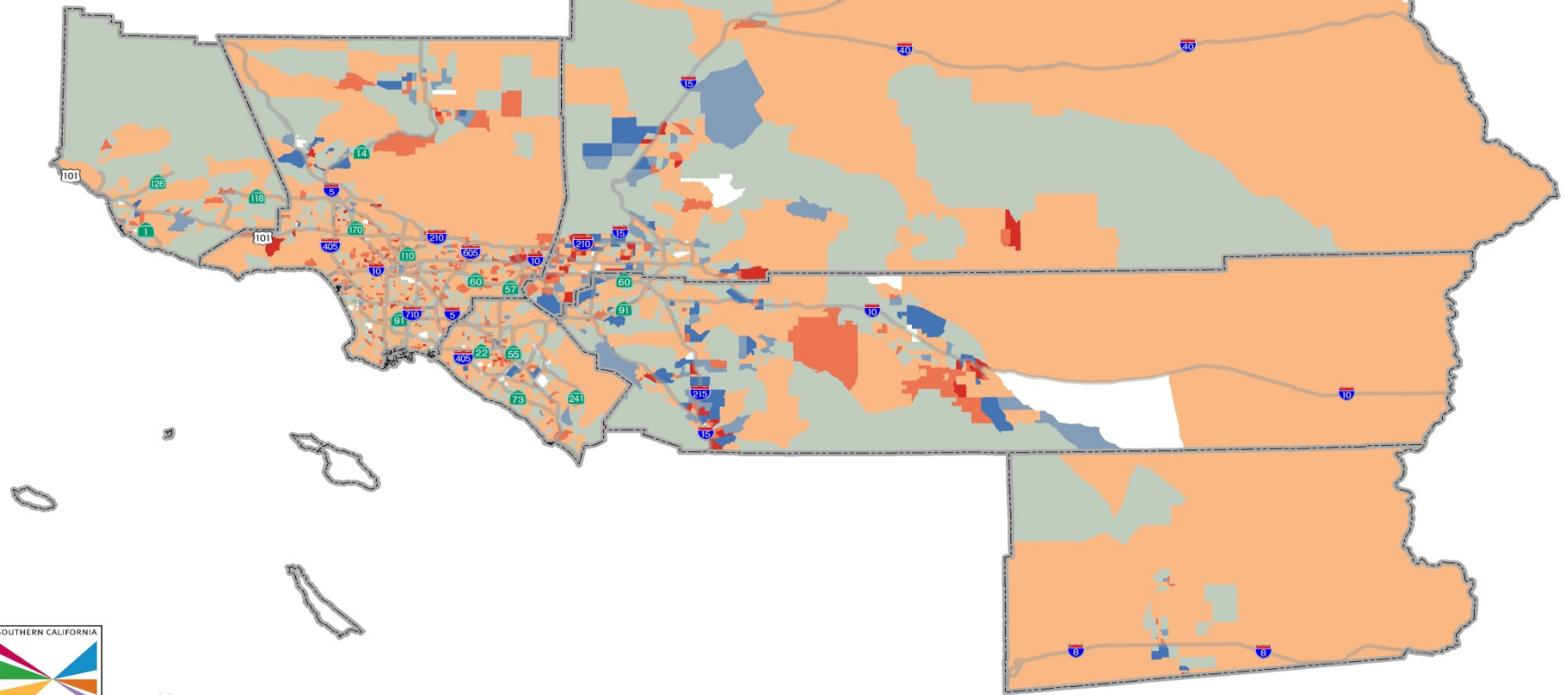
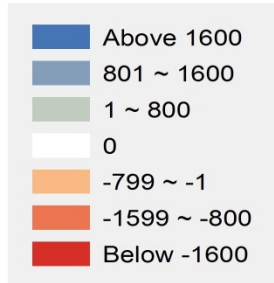
Note: The analysis excludes TAZs of 9 or less persons.

Difference in 2008 Household Distribution Using MAPE

County	# TAZ (T1)	MAPE (%)	Maximum (%)	Standard Deviation (%)
Imperial	104	30	456	48
Los Angeles	2,178	8	1,356	39
Orange	631	7	1,050	43
Riverside	465	14	202	18
San Bernardino	377	24	2,536	133
Ventura	201	21	2,552	180
SCAG Region	3,956	11	2,552	68

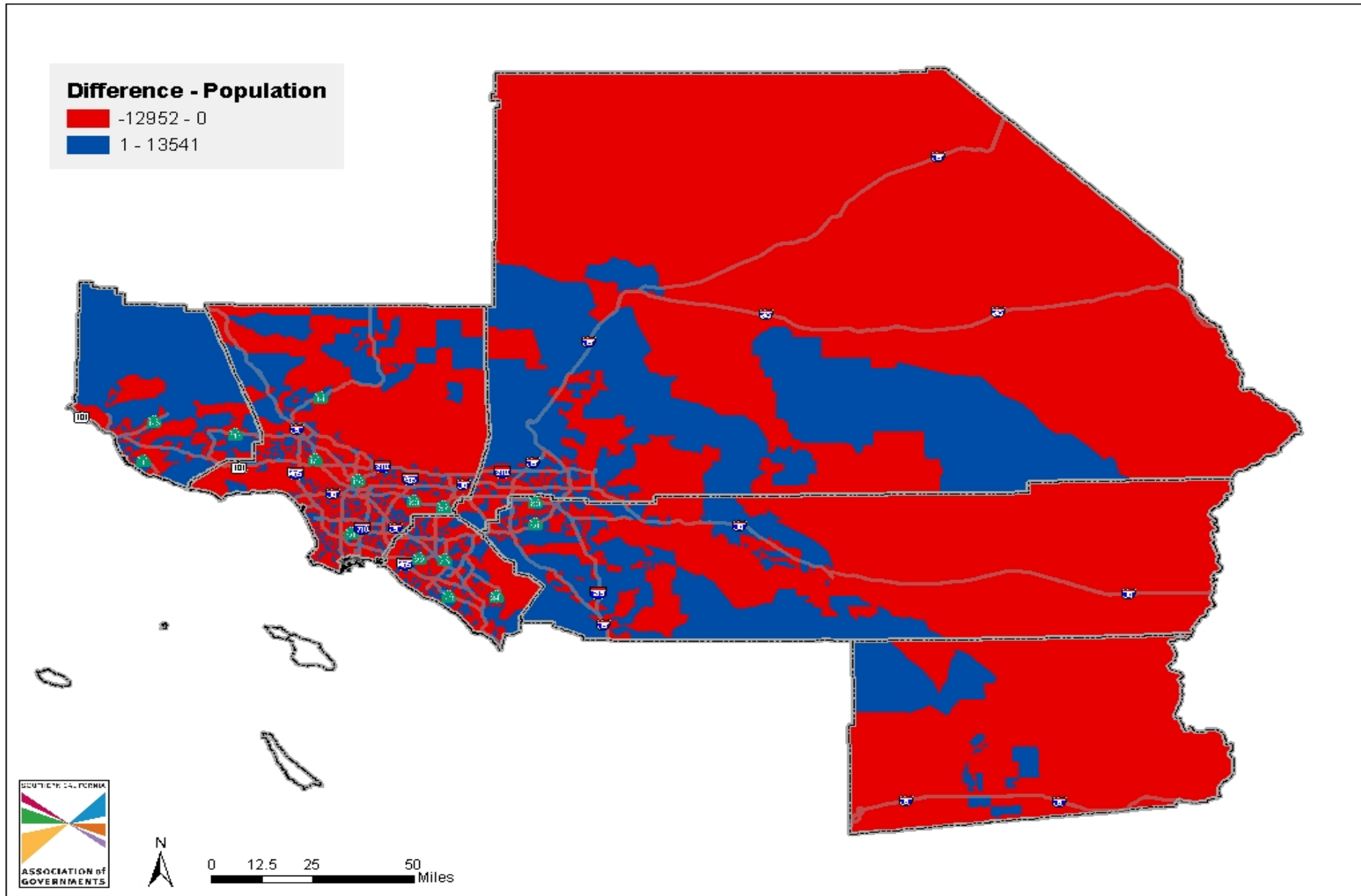
Note: The analysis excludes TAZs of 9 or less households.

Conclusion:

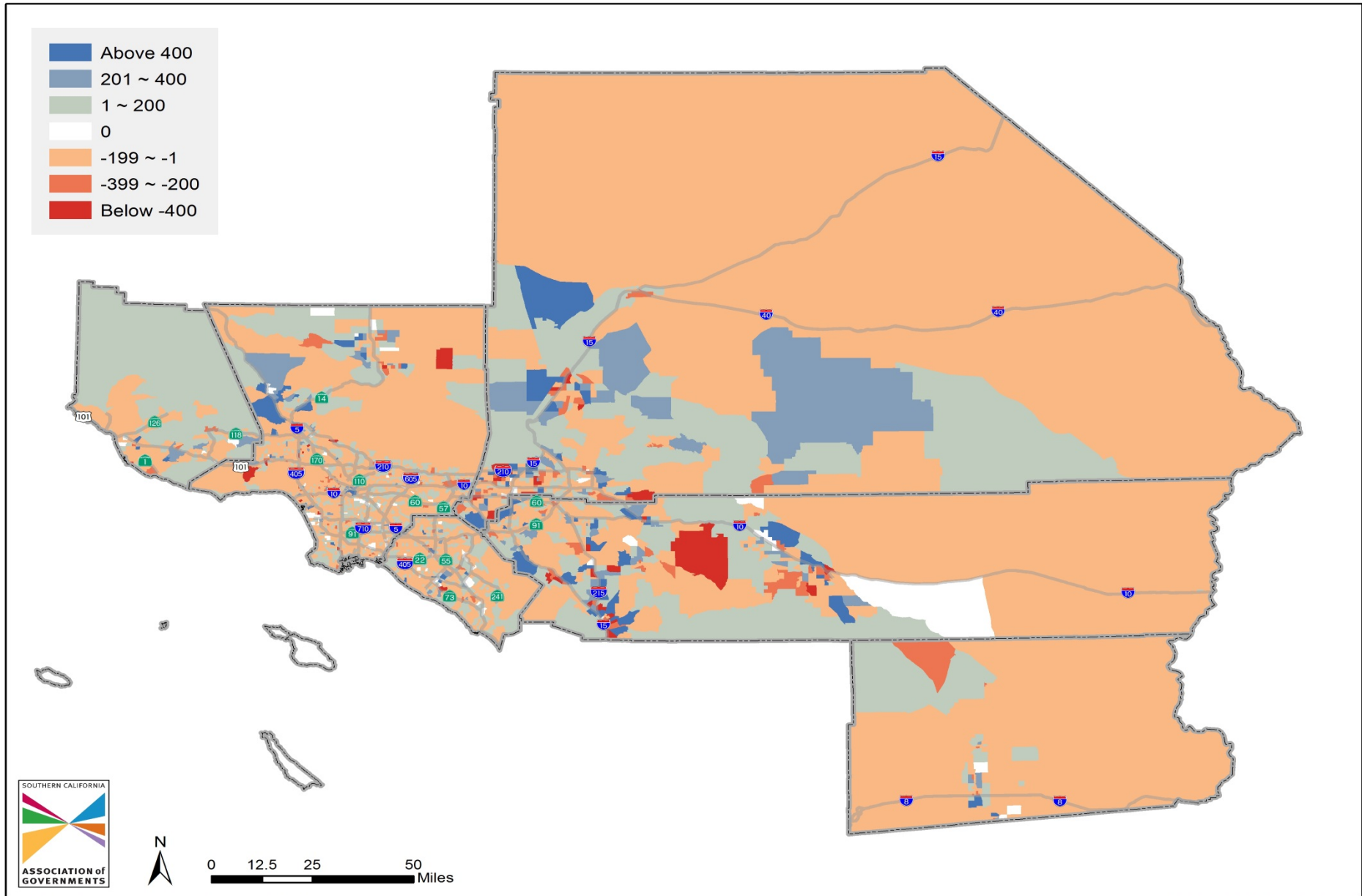


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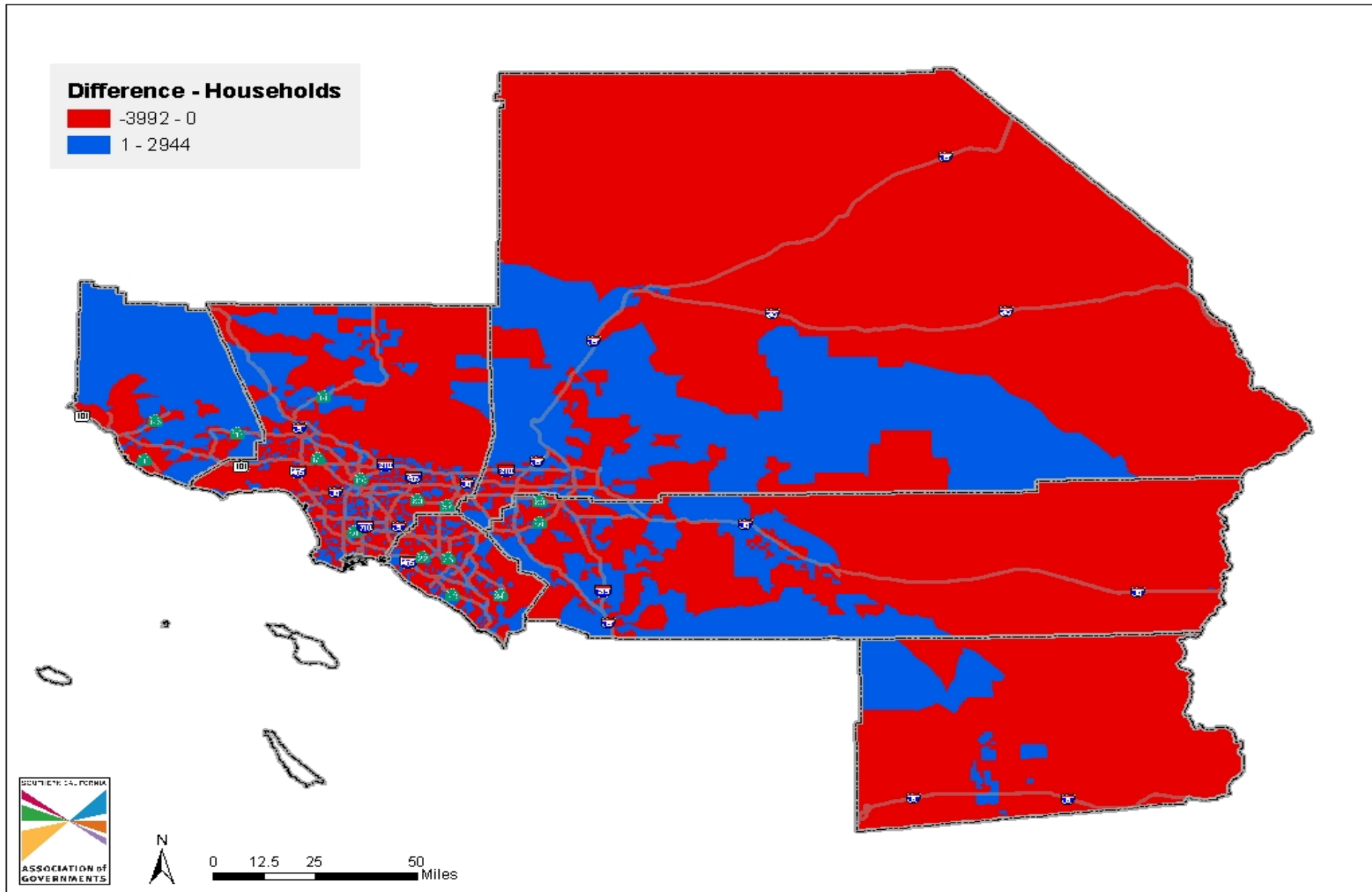
Difference in 2008 Population Distribution: SCAG Estimate and 2010 Census



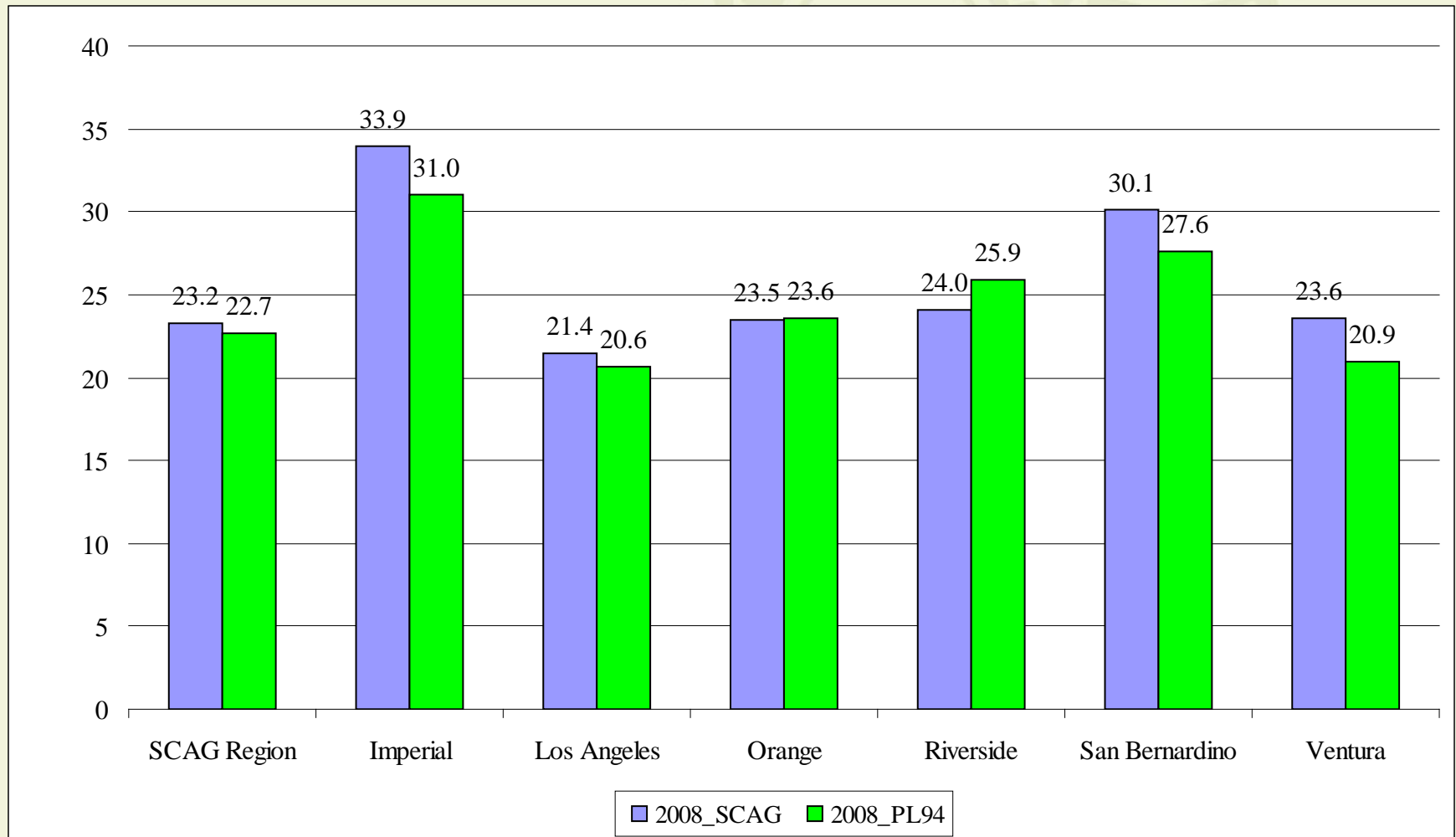
Difference in 2008 Household Distribution: SCAG Estimate and 2010 Census



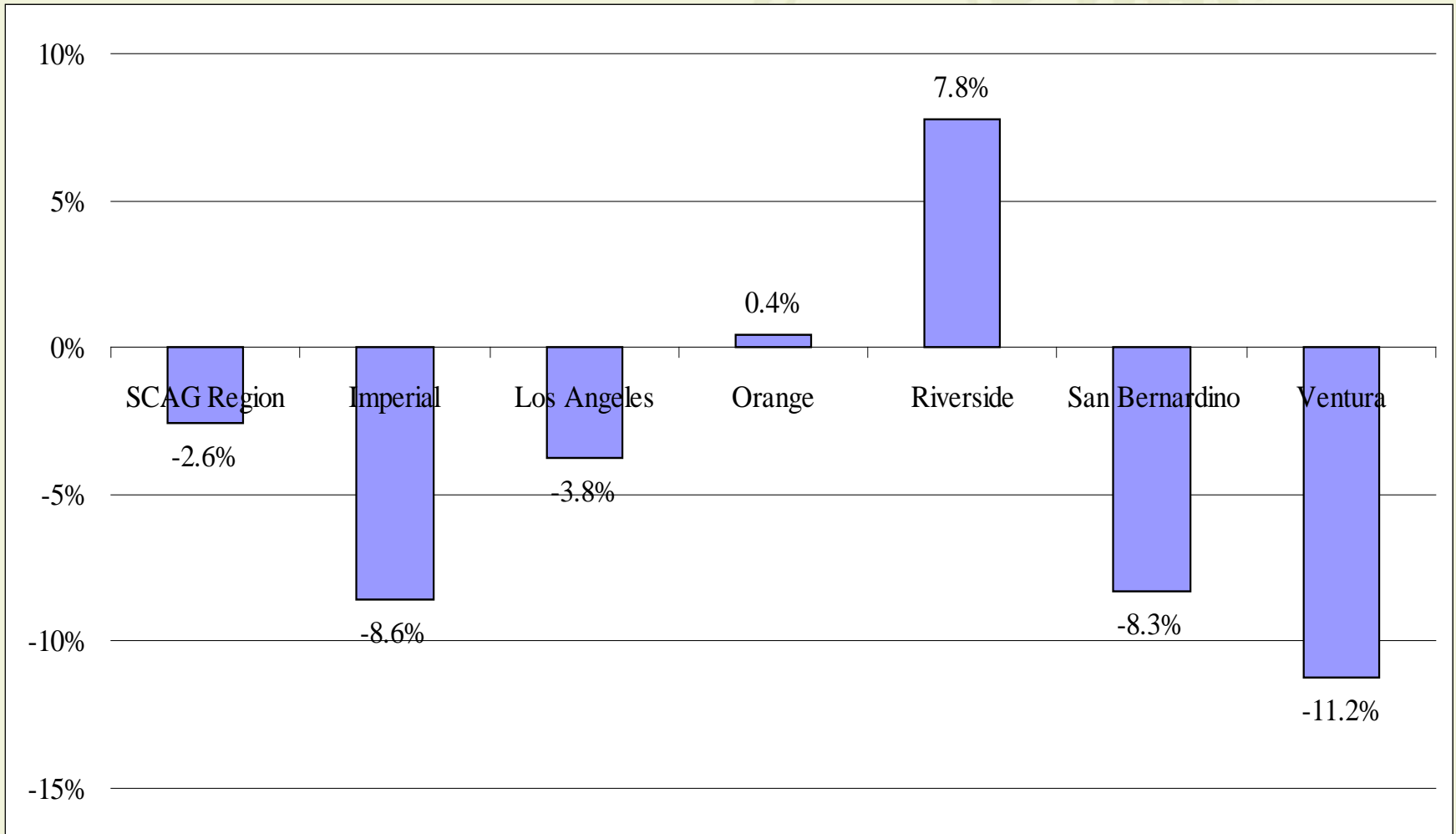
Difference in 2008 Household Distribution: SCAG Estimate and 2010 Census



2008 VMT per capita: SCAG Estimate and 2010 Census:



% Difference in 2008 VMT per capita: SCAG Estimate and 2010 Census



Census Count Question

- According to Planning (July 2011), Atlanta, Chicago, Detroit, Houston, and New York (Santa Ana in the SCAG Region) are considering or have already filed challenges to contest the 2010 population counts.
- In the 2000 Census, Census count corrections resulted in a net population gain of only about 2,700 people nationwide, despite filings from about 1,800 jurisdictions.
- If New York — or any other city — files a challenge and wins, it would gain back about \$2,200 in funding for every person missed, according to the U.S. Conference of Mayors.

2010 Census Count Question Resolution (CQR) Program

- A mechanism for State, local and Tribal officials of governmental units in the U.S. and Puerto Rico to challenge the 2010 Census population counts of housing units and group quarters.
- The Count Question Resolution (CQR) Program will address questions about housing unit and group quarters counts for three types of challenges for the 2010 Decennial Census:
 - (1) boundary (the inaccurate reporting or the inaccurate recording of boundaries legally in effect on January 1, 2010)
 - (2) geocoding (this error occurs when Census use street based geocoding locators instead of using rooftop locator)
 - (3) coverage (erroneously included as duplicates or excluded due to processing errors)

2010 Census CQR Program – cont.

- The CQR Program will accept CQR challenges beginning June 1, 2011 and ending with challenges that are received and postmarked, faxed, or emailed as of June 1, 2013.
- All functioning governmental units such as States, Counties, and Cities can challenge the 2010 Census counts.
- <http://2010.census.gov/2010census/about/cqr.php>

Analysis of 2010 Census Block Data: Overview

- The PL94 block level data (254,085 blocks in the SCAG region) (2.3% of census blocks in the nation including Puerto Rico) and GQ block level data (8,495 blocks in SCAG region) are key data sources for SCAG's development of small area socioeconomic data (SED).
- During the process of assigning PL94 data into SCAG's small areas, we have observed many instances of problematic block data.

Analysis of 2010 Census Block Data: Types of Errors

- Housing units in blocks are entirely located within freeways, ramps, or major roads.
- Housing units in blocks are entirely located within water bodies.
- Group quarters population in blocks are entirely located within freeways, ramps, or major roads.
- Group quarter institutions are located in a wrong census block.

Analysis of 2010 Census Block Data: Procedure of Searching Problematic Census Blocks

- Select blocks with boundaries that intersect freeways, ramps, or major roads.
- Select blocks that have housing units or group quarter population among the selected census blocks.
- Identify blocks with areas less than 4,000 square meters. Then identify blocks where the ratio of area and housing units (area/housing units) is less than 600.
- As a result, we identified about 800 blocks (0.3% of census blocks in the Region) with possible errors and visually confirmed the presence of problematic data using the Bing aerial imagery.

Summary Statistics of Problematic Census Blocks

County	Number of Blocks by Type			Total
	Road	Water	GQ	
Imperial County	1	-	3	4
Los Angeles County	204	3	83	290
Orange County	76	-	7	83
Riverside County	5	-	2	7
San Bernardino County	4	-	4	8
Ventura County	3	-	1	4
SCAG Region	293	3	100	396

Population Residing on the Road

County	SubRegion	City Name	Block ID		Raw Population	Raw Housing	Raw Household	Fixed Population	Fixed Housing	Fixed Household
037	Las Virgenes	Agoura Hills	Problem	060378003273007	23	10	9	0	0	0
			Proposed	060378003271000	1715	810	757	1738	820	766



Population Residing on the Road

County	SubRegion	City Name	Block ID		Raw Population	Raw Housing	Raw Household	Fixed Population	Fixed Housing	Fixed Household
037	City of Los Angeles	Los Angeles	Problem	060371132371022	275	125	123	0	0	0
			Proposed	060371132371006	5	3	2	280	128	125



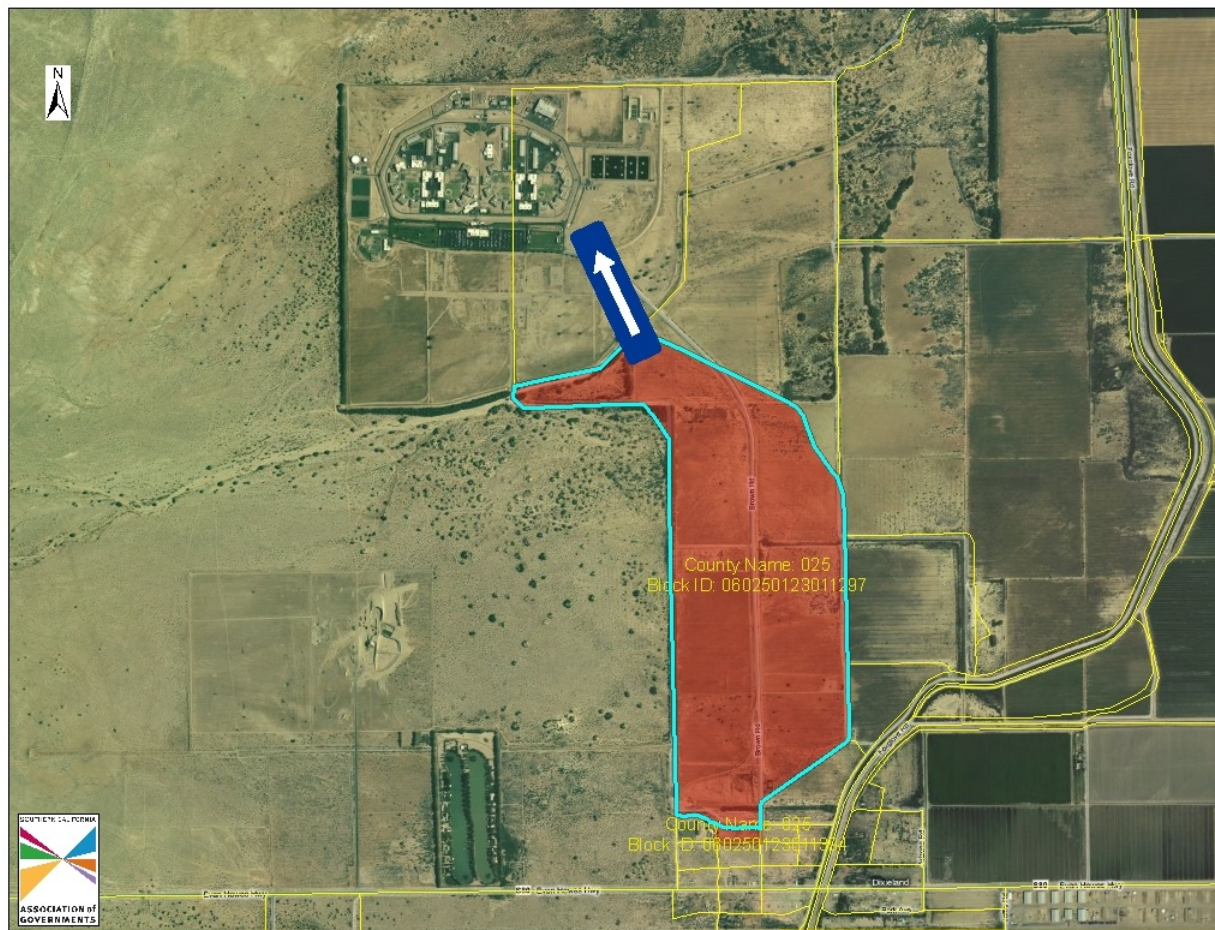
Population Residing on Water Bodies

County	SubRegion	City Name	Block ID		Raw Population	Raw Housing	Raw Household	Fixed Population	Fixed Housing	Fixed Household
037	City of Los Angeles	Los Angeles	Problem	060372742021044	11	5	5	0	0	0
			Proposed	060372742021001	3	2	2	14	7	7



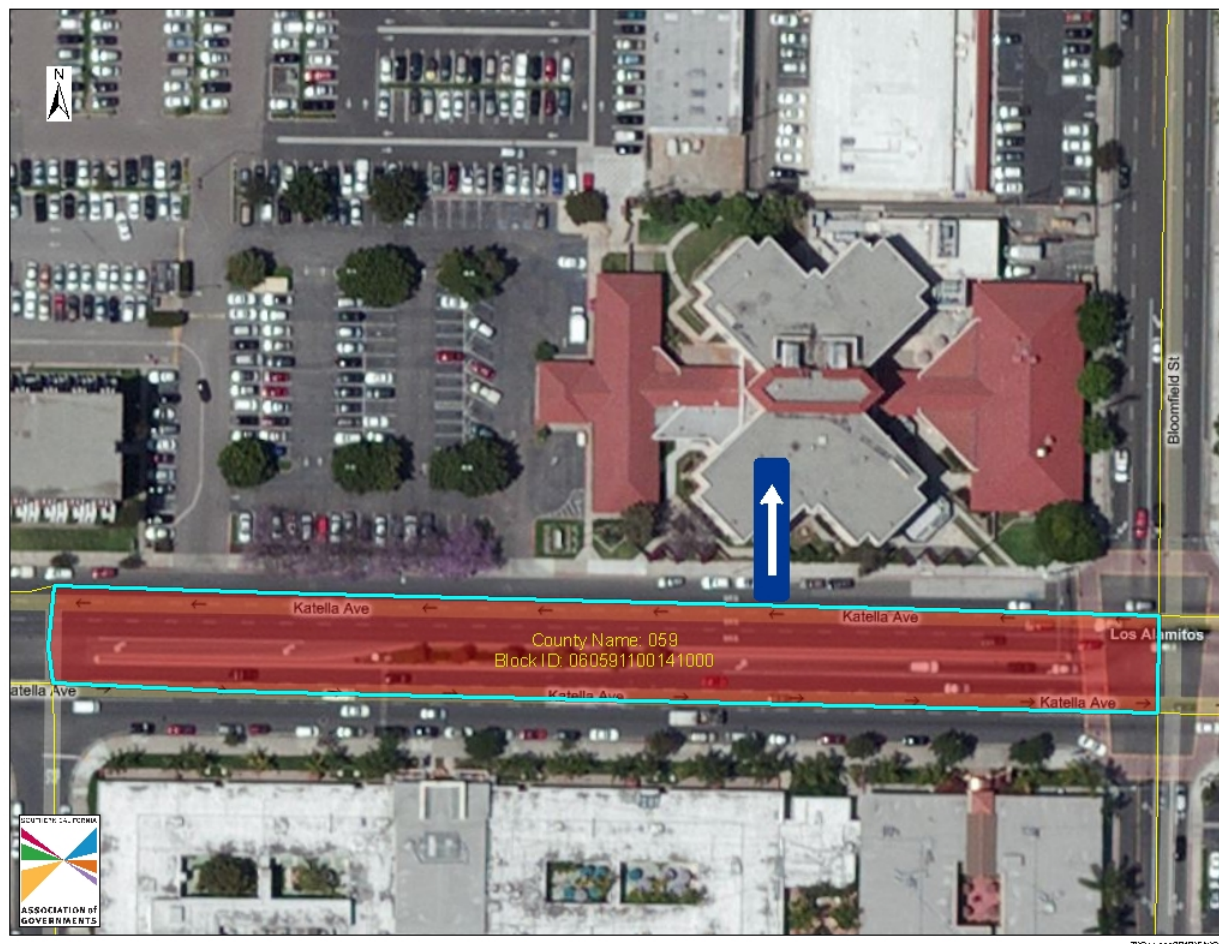
Group Quarters Population in the Wrong Census Block

County	Block ID		Raw Population	Raw Housing	Raw Household	Raw GQ	Fixed Population	Fixed Housing	Fixed Household	Fixed GQ
25	Problem	060250123011297	4311	0	0	4311	0	0	0	0
	Proposed	060250123011299	0	0	0	0	4311	0	0	4311

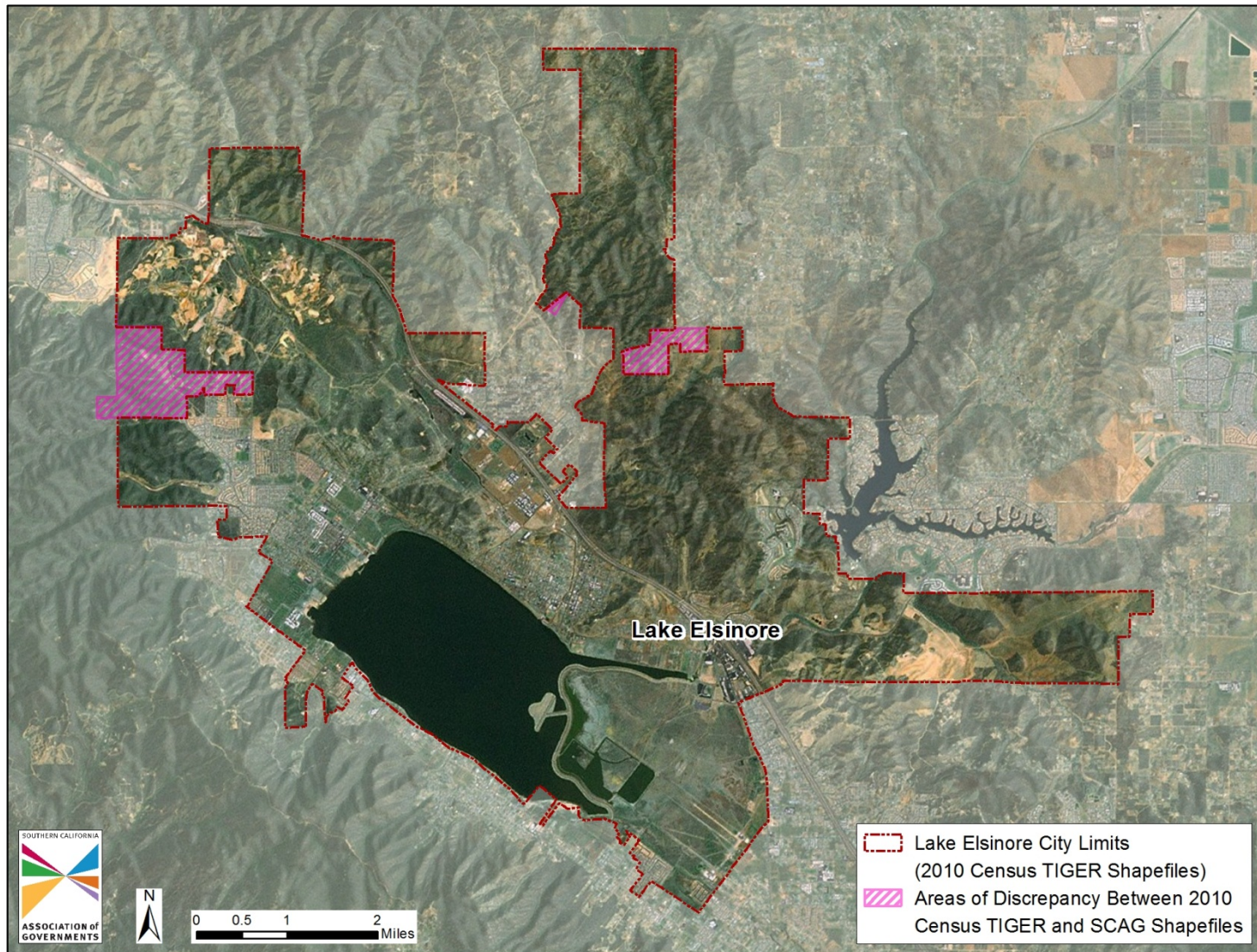


Group Quarters Population Residing on the Road

County	Block ID		Raw Population	Raw Housing	Raw Household	Raw GQ	Fixed Population	Fixed Housing	Fixed Household	Fixed GQ
59	Problem	060591100141000	209	4	3	203	0	0	0	0
	Proposed	060591101082016	0	0	0	0	209	4	3	203



City Boundary



Conclusion

- 2010 Census is the most reliable data source, and its accuracy is important because of its implication for federal funding and regional and local planning.
- SCAG currently provides 70 local jurisdictions (35% of 191 cities and 6 counties) in the SCAG Region with specified Data/GIS services for no service fees, and plans to extend its services to all of local jurisdictions in the Region.

Conclusion – cont.

- SCAG plans to assist local jurisdictions in reviewing and correcting 2010 Census block data through 2010 Census count question resolution (CQR) program.
- SCAG expects to enhance the quality of the small area socioeconomic database and projections used in regional and local planning and programs through the analysis of the 2010 Census data.

For more information please contact

Simon Choi
Chief Demographer/
Program Manager of Data/GIS & Forecasting
choi@scag.ca.gov



SOUTHERN CALIFORNIA
ASSOCIATION of GOVERNMENTS
www.scag.ca.gov